

Abstract

A method of separating water from air is provided comprising the steps of (a) contacting air having water vapour with an hygroscopic liquid mixture to produce a water rich hygroscopic liquid mixture, (b) heating at least a portion of the water rich hygroscopic liquid mixture to produce a gaseous mixture including water vapour and at least one other gaseous component, (c) condensing at least a portion of the water vapour in the gaseous mixture to produce liquid water and a depleted gaseous mixture at a first pressure, and (d) removing at least a portion of the at least one other gaseous component to maintain the first pressure below a predetermined pressure, wherein the depleted gaseous mixture is in fluid communication with the water rich hygroscopic liquid mixture. An absorber vessel is also provided for effecting the method of separating water from air.

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